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IN THE

Supreme Court of the United States

OCTOBER TERM, 1955

No. 734.

IN THE MATTER OF THE APPLICATION

of

ROBERT JULES TATINCLOUX and
ROGER GEORGES GUY,

Petitioners,

THE COMMISSIONER OF PATENTS,

Respondent.

PETITION TO THE SUPREME COURT OF THE UNITED STATES

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Petition for a writ of certiorari to review the judgment of the United States Court of Customs and Patent Appeals.

1a.

The case in which a review is sought is identified as *in re Tatincloux, et al.*, Patent Appeal No. 6067, decided by the Court of Customs and Patent Appeals April 28, 1955 and cited as: 43 CCPA (Patents) (page number not available for another week or ten days); 228 F. (2d) 238; 108 USPQ 125.

1b.

i-ii

The judgment of the court sought to be reviewed is dated April 28, 1955; the decision on rehearing is dated December 8, 1955; the order making the judgment final

is dated January 16, 1956; the date of entry of the judgment in the Court of Customs and Patent Appeals is apparently haphazard, having no relation to the day on which the decision is rendered or to the day on which the decision becomes final.

According to 35 U. S. C., Section 144, the date which governs the further proceedings in the case is the date upon which the court returns to the Commissioner of Patents a certificate of its proceedings and decision. In this case that date is January 16, 1956.

iii

The statute Title 28 U. S. C. Sec. 1256 confers jurisdiction on this court to review the judgment or decree in question by writ of certiorari. The statute reads as follows:

SEC. 1256. Court of Customs and Patent Appeals; certiorari. Cases in the Court of Customs and Patent Appeals may be reviewed by the Supreme Court by writ of certiorari.

1c.

First Question

May the Court of Customs and Patent Appeals, in reaching its decision, disregard the evidence which was presented to the tribunals of the Patent Office and reach a conclusion which is contrary to that evidence? The rules of the Patent Office provide for the submission of evidence when questions of fact arise, and it is customary to undertake considerable research at material expense to present evidence of this sort. Such evidence is ordinarily incorporated in an affidavit of the person who undertakes the research. The organic statute of this court, 35 U. S. C. 144 provides that the court shall hear appeals on the evidence produced before the Patent Office. In this case

the decision is clearly contrary to the evidence and the first question is, accordingly, whether the Court of Customs and Patent Appeals is bound by its statute to decide in accordance with the tenor of the evidence before it.

Second Question

The decision of the Court of Customs and Patent Appeals is marked by internal and inexplicable conflict.

Four claims were on appeal to the Court of Customs and Patent Appeals; two of them they allowed, reversing the Patent Office; two of them they rejected, sustaining the Patent Office. The principles which they enunciated in reversing the Patent Office as to the allowed claims are equally applicable to the two rejected claims; there is no distinction. Their favorable reasoning applies with equal force to all claims.

When this internal inconsistency was disclosed on Petition for Reconsideration, the court changed its wording, but left the inconsistency in the case.

Third Question

May the Court of Customs and Patent Appeals change the facts found by the Patent Office to sustain a position?

The Board of Appeals made a finding of fact which should have been conclusive, in favor of the petitioner, as to all issues in the case. It rendered a decision contrary to its own finding of fact. The Court of Customs and Patent Appeals reversed the Board in part, but in dealing with the inexplicable failure of the Board to honor its own finding, rewrote the critical finding of fact to give it the reverse significance.

The Board of Appeals found: "It is not apparent that an obvious unexpected result would flow from adding the

solidifying agent and forming the gas bubbles at the same time." That is a classical statement of patentable subject matter.

In its decision on rehearing, the court stated that the Board held: "that no unobvious or unexpected result would be attained—", which is not what the Board found.

We have the question of whether the Court of Customs and Patent Appeals is bound by the findings of fact of the Patent Office, as indicated by its organic act. The question may be rephrased in these words: Is the court bound by the evidence produced before the Patent Office and by the findings of fact of that administrative tribunal, or is it amenable only to its own whim.

Fourth Question

For no good reason the decision of the Court does violence to several established rules of law, rules of venerable antiquity, which establish the conditions of patentability. Among them are the rules of law:

That the achievement of a material and unobvious improvement in an art or process is patentable; no citation of cases needed for so basic a principle.

That a change in a process, though simple, is patentable if it results in disproportionate benefit; *Ex parte* Bach 57 USPQ 152; *In re Malcolm,* 129 Fed. 2nd 533; 54 USPQ 241.

That prior art, to constitute an anticipation, must bear within its four corners adequate directions for the practice of the invention.

Seymour v. *Osborne,* 11 Wall 516; 20 L. Ed. 33;
Dewey & Almy v. *Mimex,* 124 Fed. 2nd 986;
In re Cramblet, 62 Fed. 2nd 358;
In re McGeorge, 33 CCPA 1151;
In re Hampel, 34 CCPA 1139;

Ex parte Thurman, 70 USPQ 164;
In re Sussman, 141 Fed. 2nd 267; 60 USPQ 538;
Am. Anode v. *Lee Tex*, 136 Fed. 2nd 581; 58 USPQ 7.

Although no difference in principle exists, these sound rules of law have been put aside to establish a baseless distinction between the patentability of claims 19 and 29 on the one hand and 21 and 24 on the other. The internal inconsistency of the decision below is made evident by this violation of universally accepted canons. Apply the same canons to claims 19 and 29 that were applied to 21 and 24 and a like reversal of the Patent Office will necessarily follow.

Fifth Question

Are the following two claims allowable under the law:

19. A process for making a refractory that comprises making an aqueous colloidal suspension of a refractory material, simultaneously filling the suspension with gas bubbles and flocculating said suspension about said bubbles, and thereafter drying and firing the product.

29. The process of claim 19 in which the refractory material is clay.

In what way can one justify their rejection after the reversal of the Patent Office as to claims 21 and 24, which read as follows:

21. A process for making a refractory having a bubbly interior that comprises simultaneously generating bubbles in and flocculating slip by the reaction within the mass of a metal of the type of aluminum, zinc, and magnesium with an alkali metal hydroxide.

24. The method of making a porous refractory body that includes the steps of simultaneously generating bubbles in and setting slip within the mass by the reaction within the mass of a metal of the type of aluminum, zinc and magnesium with a member of the hydroxides, silicates, and carbonates of alkali metals.

Sixth Question

Is the CCPA invested with arbitrary and unreviewable powers in cases under the patent laws?

In the present case the rejection of claims 19 and 29 is merely arbitrary. The identical reasons stated by them in reversing the Patent Office as to claims 21 and 24 are directly applicable to claims 19 and 29. They said:

> "The whole concept that the reaction be carried out so as to result in a simultaneous flocculation and generation of gas is lacking in Setterberg. Since we believe claims 21 and 24 sufficiently distinguish over the reference it becomes necessary to reverse the decision of the Board as to those claims." (Decision of April 28, 1955, last paragraph)

The same is true of claims 19 and 29. No basis exists to explain the difference in result.

1d.

The Constitutional Provision

"The Congress shall have power • • • to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

The Right of Congress to Legislate

McClurg against *Kingsland*, 42 U. S. 202-206, 11 L. Ed. 102, 103:

> "The powers of Congress to legislate upon the subjects of patents is plenary by the terms of the Constitution, and as there are no restraints on its exercise, there can be no limitation of their right to modify them at their pleasure so they do not take away the rights of property in existing patents."

The Statutes

35 U. S. C.—Sec. 144. Decision on appeal.

The United States Court of Customs and Patent Appeals, on petition, shall hear and determine such appeal on the evidence produced before the Patent Office, and the decision shall be confined to the points set forth in the reasons of appeal. Upon its determination the court shall return to the Commissioner a certificate of its proceedings and decision, which shall be entered of record in the Patent Office and govern the further proceedings in the case.

U. S. C. Title 35 Section 100: When used in this title unless the context otherwise indicates—

(a) The term "invention" means invention or discovery.

(b) The term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

(c) The terms "United States" and "this country" mean the United States of America, its territories and possessions.

(d) The word "patentee" includes not only the patentee to whom the patent was issued but also the successors in title to the patentee.

Section 102—A person shall be entitled to a patent unless:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of

one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Section 103—A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Section 104—In proceedings in the Patent Office and in the courts, an applicant for a patent, or a patentee, may not establish a date of invention by reference to knowledge or use thereof, or other activity with respect thereto, in a foreign country, except as provided in section 119 of this title. Where an invention was made by a person, civil or military, while domiciled in the United States and serving in a foreign country in connection with operations by or on behalf of the United States, he shall be entitled to the same rights of priority with respect to such invention as if the same had been made in the United States.

The foregoing sections constitute chapter 10 of the Law of 1952 which chapter is entitled "Patentability of Inventions".

Rule 132 of the "Rules of Practice of the U. S. Patent Office in Patent Cases" states: When any claim of an application is rejected on reference to a domestic patent which substantially shows or describes but does not claim the invention, or on reference to a foreign patent, or to a printed publication, or to facts within the personal knowledge of an employee of the Office, or when rejected upon a mode or capability of operation attributed to a reference, or because the alleged invention is held to be inopera-

tive or lacking in utility, or frivolous or injurious to public health or morals, affidavits traversing these references or objections may be received.

1e.

Statement of the Case Showing the Facts Under Which the Errors Arose

This invention relates to making refractories, and the commonest form of a refractory is a brick. The Court is undoubtedly familiar with the ordinary type of solid brick, found everywhere, but is probably not familiar with bubbly or porous brick. Such bricks are made for use in constructing the domes of high temperature furnaces such as are used in making glass, for instance. They are better than solid brick because they are filled with air spaces, are porous or bubbly in nature, and have a much better insulating value than solid brick.

In thinking of prior art bubbly brick, one does not think correctly if one imagines bubbles of air of equal size uniformly dispersed throughout the brick. The bubbles are of non-uniform size, vary greatly in their dimensions, are not uniformly scattered throughout the brick, but are located with such irregularity of position that various parts of the brick have a materially greater density than other parts. Those parts of the brick which are most filled with bubbles are structurally the weakest so that the bricks are of nonuniform strength and are subject to breakage at the points of least resistance.

Claim 19 (f59) contains a good statement of the invention and we copy it here with certain underlinings designed to point out the novel features of the invention:

> 19. A process for making a refractory that comprises making *an aqueous colloidal suspension* of a refractory material, *simultaneously filling* the suspension with gas bubbles *and flocculating* said suspension

about said bubbles, and thereafter drying and firing the product.

It is not asserted that Nielsen produces a colloidal suspension. Therefore, the recital of the colloidal suspension constitutes a specific difference over the reference.

It is admitted that Nielsen does not simultaneously form the bubbles and solidify the refractory about the bubbles as they form. This is a second specific difference over the reference.

While it is thought that two specific differences over a reference ought to be sufficient to secure the allowance of a claim, a third distinction in favor of the applicant was pointed out by the Board of Appeals in the following words:

> "It is not apparent that an unobvious or unexpected result would flow from adding the solidifying agent and forming the gas bubbles at the same time."

That statement does not deny that an unexpected result does occur, the Board simply states that it is not obvious that it would occur. This is an argument in favor of the applicant, not against him. Had the Board said that it was obvious that the result would follow from the act, it would have been an argument against the applicant, but in this case the Board has stated that it was not obvious. The Board has, therefore, found as a fact that what the applicant has done is unobvious.

The support for the foregoing points is found on pages 39 and 40 of the record before the CCPA.

A fourth point in favor of the applicant is presented in the two affidavits by Godron found on pages 23 to 29 and at fs 36 and 37. They have been improperly ignored or denied weight.

Those affidavits are accompanied by bricks made according to the process of Nielsen and the process of the

applicant, examples of which are in the record and pictures of which are on page 29. Fig. 1 represents the section of a fired brick prepared according to Nielsen's process and Fig. 2 represents a section of the fired brick prepared by applicants' process. The very great superiority of applicants' over Nielsen's product is apparent from the pictures. It is even more apparent from the bricks.

Attention is particularly called to f26 where comparative tests are made of the two products. It is there shown for example that the modulus of rupture of the applicants' brick is at least three times as great as that of the Nielsen product and that the crushing strength of applicants' brick at least three times as great as Nielsen's product.

The foregoing results show beyond any question that the Board of Appeals was correct in holding that such results were not obvious.

It therefore becomes plain that the CCPA has erred in rejecting claims 19 and 29 and has in fact rendered a decision which is contrary to the findings of fact, and which is certainly contrary to the evidence which was before it.

It is also clear, that the court below has misapplied the law in that it has failed to recognize specific differences, and the astonishing and unexpected effect of producing a product which is greatly superior to that which is shown in the references.

Analysis of the Reference Nielsen

The Nielsen patent has a very poor and incomplete disclosure and it consequently requires close study to make sense of it at all. To the extent that it can be understood, the following process is disclosed:

STEP 1. Produce slip *without using water.*

STEP 2. Make this slip porous by mixing a foam producing material in it.

STEP 3. Add a chemical means to produce a molding consistency.

STEP 4. The manner in which the mass is solidified is not described, but it is presumably by drying out the exterior of the brick in a porous mold which acts like a sponge to absorb the water in the slip. That is the tedious process of the prior art. Since no other process is described, it is to be presumed that the standard prior art method is employed.

The Nielsen patent is found on page 51. In lines 6 to 20 Nielsen describes the prior art method of making a plastic dough (line 18), and asserts that water had generally been added to the clay to produce reduced stiffness. We assume that the clay which he employs is used as it comes from the ground, and as it comes from the ground clay already contains a certain amount of water. We presume that he intends to use clay with its original water content and not to dry it out before using it. This interpretation is borne out by the paragraph beginning on line 19 and ending at line 37.

In that paragraph, Nielsen inveighs against the addition of water. In lines 38 to 43 Nielsen asserts that his own process proceeds "without the addition of water". In column 2, lines 10 to 18, Nielsen states that he uses chemical means alkaline hydroxides, etc., etc., to make the clay become liquid. By liquid, he means that it is fluid (col. 2, line 36) and we presume that it is in such a state that it can be poured (col. 1, line 42).

The affidavits of Godron show that the Nielsen disclosure is inoperative as it is described and that it is actually necessary to *add water* to get any results. However, at this point, we are taking the Nielsen disclosure at its face value.

At this point, attention is drawn to the fact that claims 19 and 29, which have been rejected on Nielsen, call for

making an aqueous colloidal suspension. It is obvious, taking Nielsen's disclosure at its face value, that he does not make an aqueous colloidal suspension. It is certainly not aqueous, as he denounces the use of water, and he says nothing about its colloidal state. He merely describes it as a fluid slip and that, as pointed out by the Board of Appeals, is not necessarily a colloidal suspension.

Claim 19 also recites the filling of the suspension with gas and its simultaneous flocculation about the bubbles thus formed. It therefore requires that we study Nielsen further to see if that step is made out.

Nielsen, in column 2, lines 19 and 20, states that "The porosity is then produced in one of the above described manners" and we return to column 1, lines 6 to 16 to find out what he means by the above described manners. The ways he refers to are: causing air to be injected into the mass of clay, mixing a foam producing substance into the clay, generating air within it, supplying air thereto, mixing foam in it. The applicant's reagents and method of producing the simultaneous foaming and setting are not disclosed. Furthermore, in claim 1, Nielsen states that his invention consists of the following steps, "first adding deflocculants to a stiff plastic mass of clay, then making the thus produced fluid mass porous by incorporating gases therein, and finally adding flocculants to the porous fluid mass * * *." We therefore see by his own disclosure, that Nielsen did not have the concept of simultaneously producing the bubbles and flocculating the mass about the bubbles. He did not, furthermore, disclose any means which would inherently produce such a reaction. Therefore, anticipation is not made out directly and it is not made out by implication. It follows, that claims 19 and 29 are not met by Nielsen, who is totally devoid of similar process steps, and of a knowledge of the basic reaction which is employed by the applicants, and who lacks reactants capable of bringing about the reaction. These claims are consequently free and the rejection thereof should be reversed.

1h.

The patent laws are subjected to interpretation by no less than eleven Courts of Appeal, including those of the nine circuits, the Court of Appeals for the D.C., and the Court of Customs and Patent Appeals. Of these eleven courts, only the decisions of the Court of Customs and Patent Appeals were not reviewable by this court prior to the Law of 1952. There was never any rational ground for such exclusion. It was not more logical to say that the Court of Customs and Patent Appeals, of all appellate courts, needed no supervision than to say that the Second Circuit alone needed no supervision. Doubtless their exclusive status, in a position equal or superior to that of this court in patent affairs, was agreeable to the Court of Customs and Patent Appeals, but logic lacks a basis to rationalize it.

The Law of 1952 corrected that situation, and gave this court supervision of the Court of Customs and Patent Appeals by writ of certiorari.

Prior to the Law of 1952, the Court of Customs and Patent Appeals' decisions in customs cases were amenable to review by this court, because the law so provided. The law did not so provide in patent cases, but that exclusion must certainly have been by Congressional oversight, not by intent. The oversight was remedied by the Law of 1952. No rational ground for distinguishing between customs cases and patent cases, as to review by writ of certiorari, can be produced. The power of Congress is plenary in such cases, as this court has stated, and the Congress could extend the right of review or withhold it as it saw fit. It has now extended that right.

The factitious distinctions of the former law have been removed.

A court not subject to review, sitting with jurisdiction parallel to ten other courts whose decisions are subject to review, is a dangerous anomaly.

This court should take jurisdiction and issue a writ of certiorari to the Court of Customs and Patent Appeals in order to impress upon that court its parallel status, that its judgments should not be arbitrary, that its judgments are subject to review, and that it is bound by its organic act and is subject to the rules of judicature which regulate other Federal Appellate Courts.

Designation of the Record

The transcript of record to be certified by the Clerk of the U. S. Court of Customs and Patent Appeals shall include all matters included in the "Transcript of Record" which was filed with the said court in Patent Appeal Docket No. 6067, on appeal from the Board of Appeals.

In addition, it shall include the Decision of the Court of Customs and Patent Appeals dated April 28, 1955, the Erratum of May 20, 1955, the letter of July 1, 1955 signed Cabell N. Pryor, the Decision of December 8, 1955, the Memorandum of December 8, 1955 from the clerk of the Court of Customs and Patent Appeals, the Order of the Court dated January 16, 1956, and the Notice of Allowance dated February 1, 1956.

Respectfully submitted,

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1i.

APPENDIX

Decision, dated April 28, 1955.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

In the Matter of the Application of Robert Jules Tatincloux and Roger Georges Guy.	October Term 1954. Patent Appeal No. 6067. Patent Calendar No. 12. Serial No. 1,665.

Worley, Judge.

Two claims in appellants' application for a patent on "Refractories and Method of Making Them," were allowed by the Primary Examiner of the United States Patent Office. He rejected claims 19, 21 to 29, inclusive, and 31.

The Board of Appeals reversed the examiner's rejection of claims 22, 23, 25, 26, 27, 28, and 31, and sustained his rejection of the other claims involved. On appeal here are claims 19, 21, 24, and 29. The first two are illustrative and read:

> 19. A process for making a refractory that comprises making an aqueous colloidal suspension of a refractory material, simultaneously filling the suspension with gas bubbles and flocculating said suspension about said bubbles, and thereafter drying and firing the product.
>
> 21. A process for making a refractory having a bubbly interior that comprises simultaneously gen-

erating bubbles in and flocculating slip by the reaction within the mass of a metal of the type of aluminum, zinc, and magnesium with an alkali metal hydroxide.

The invention is directed to the making of refractories, or, more specifically, bricks used in high temperature furnaces. They are characterized by their "bubbly" interiors which provide high insulation properties. Appellants' specification recites that the desired result is attained by placing the refractory material in colloidal suspension, filling the mass with bubbles, simultaneously flocculating it about the bubbles, then drying and firing the brick. It is stated that in the preferred form of the invention the refractory material, clay, is put in the form of a slip and the deflocculated mass simultaneously filled with gas bubbles and hardened by flocculating. The formation of the bubbles and the flocculating are carried out simultaneously by the reaction of a hydroxide, silicate, or carbonate of an alkaline metal with aluminum, zinc, or magnesium within the colloidal suspension. It is claimed that in the above method the bubbles are distributed very regularly throughout the mass, and the subsequent hardening of the refractory material produces bricks of uniform structure possessing great strength and high insulating qualities.

The references relied on are:

Setterberg (Br.)	281,254	April 12, 1928.
Nielsen	2,151,932	March 28, 1939.

The patent to Setterberg recites mixing finely powdered refractory materials with sufficient water to form a plastic dough, adding a substance such as aluminum, capable of evolving gas by reaction with water, forcibly mixing the reaction material into the plastic dough, and then molding

the mixture into blocks which are dried and burned at high temperature. The specification states that "Through the gas-forming process a great number of pores are formed and if care is taken in shaping of the blocks, these pores will remain in the blocks so formed."

The patent to Nielsen relates to a process for manufacturing porous articles of clay. It discloses several known processes for producing such articles, including air injection, mixing clay with a previously formed foam or a foam-producing substance, and generating gas within the clay mass. It states that those processes require the clay mass to be "of a not too stiff consistency," the desired consistency usually being obtained by the addition of water; that certain drawbacks result therefrom in the molding of articles from the porous mass; and that the known methods of the manufacture of non-porous clay masses cannot be used to produce porous articles because the porous mass is too liquid to retain its shape. The patentee states that his invention eliminates those drawbacks by obtaining the desired liquid consistency without an increased admixture of water to the clay mass, but by adding a deflocculating agent, such as "alkaline hydroxides or salts of alkalies and weak acids, such as potash, soda, water glass, etc." to produce a slip, the liquid mass made porous in the manner known to the art, and the porous mass stiffened by chemical means in order to mold it in the normal manner.

The claims before us were rejected by the examiner on the patent to Setterberg, with claims 19 and 29 further rejected on Nielsen.

The board sustained the rejection of claims 21 and 24 on Setterberg, holding they distinguish over that reference only by reason of the fluidity of the mixture, and that no

unobvious or unexpected result would be attained by adding sufficient water to Setterberg's mixture so that it could be poured into molds. The board stated such a mixture would constitute a "slip."

In comparing the Nielsen disclosure with claims 19 and 29, the board held that although claim 19 requires an aqueous colloidal suspension of a refractory material and a simultaneous filling of the suspension with gas bubbles and flocculation of the suspension about said bubbles, Nielsen discloses first the forming of the gas bubbles, and then the addition of a solidifying agent. The board added "It is not apparent that an unobvious or unexpected result would flow from adding the solidifying agent and forming the gas bubbles at the same time."

Claim 29 is dependent on claim 19 except for the limitation that the refractory material is clay. The board observed that Nielsen uses clay as the refractory material and held that claim unpatentable for the same reasons applicable to claim 19.

Thereafter appellants petitioned for reconsideration of the board's rejection of claims 19 and 29 on Nielsen, alleging that action to be contrary to its reasoning because of the statement quoted above.

The board's attention was directed to an affidavit which alleged that tests made according to the Nielsen process and appellants' process show that "the comparable moduli of rupture for the refractories of applicants and of Nielsen are in the proportion of 19 for applicants' to about 5 for Nielsen's," and "Another astonishing advantage is also shown in that Nielsen refractory had a crushing strength of only 2 kg/sq.c. and another had a crushing strength of 8, whereas applicants' refractories had a crushing strength of 25 kg/sq.c."

Decision, dated April 28, 1955.

The board, after noting that appellants had been allowed specific claims, and observing that the involved claims were broadly drawn, denied relief and held that the affidavit "is not convincing in connection with this broad question since affiant did not apply these two procedures to similar mixes employing the same ingredients in each."

We are in agreement with the board that claims 19 and 29 do not patentably distinguish over the Nielsen patent. A comparison of appellants' claim 19 with Nielsen's claim 1 reveals their similarity, the latter succinctly describing Nielsen's disclosure.

Appellants' Claim 19	Nielsen's Claim 1
A process for making a refractory that comprises making an aqueous colloidal suspension of a refractory material, simultaneously filling the suspension with gas bubbles and flocculating said suspension about said bubbles, and thereafter drying and firing the product.	Process for the manufacture of porous ceramic articles of argillaceous materials, consisting in the following steps, first adding deflocculants to a stiff plastic mass of clay then making the thus produced fluid mass porous by incorporating gases therein and finally adding flocculants to the porous fluid mass and moulding the thus produced restiffened porous mass in known manner.

It will be noted that the only significant differences between the two claims are that claim 19 specifies a "colloidal suspension" instead of a "fluid mass," described in the specification of Nielsen as a "slip," and that it specifies "simultaneously" filling with bubbles and flocculating, instead of successively.

The fact that claim 19 specifies a "colloidal suspension" rather than a "slip" does not describe the essential feature of appellants' invention. Their specification states that "In the preferred form of the invention a refractory body, such as clay, is put in the form of slip or barbotine and the deflocculated mass is simultaneously filled with gas bubbles and hardened by flocculating." Also in their brief the following appears:

> It also seems that the Board has erred in pretending to themselves that the invention will not work except in true colloidal solutions. That is a theory for which they have no justification. It will work in slips as well as in true colloidal suspensions, as the applicants have continuously asserted.

The basic question, therefore, as to the patentability of claims 19 and 29 over the Nielsen reference, relates to the simultaneity of the introduction of the gas and the flocculant. We are of the opinion such action does not constitute invention. That requirement of the claims would be met if, in the Nielsen disclosure, air were introduced and flocculants were added at the same time. The board stated "It is not apparent that an unobvious or unexpected result would flow from adding the solidifying agent and forming the gas bubbles at the same time. Appellants interpret that as an argument in their favor, stating, "That statement does not deny that an unexpected result does occur, the Board simply states that it is not obvious that it would occur. * * * The Board has, therefore, found as a fact that what the applicant has done is unobvious."

It is hardly necessary to dissect appellants' reasoning to show the error therein. In our opinion, and as we interpret the holding of the board, no new result would flow

merely from making simultaneous the two successive steps shown by Nielsen. We concur with the board that claims 19 and 29 do not define invention over Nielsen.

We can not, however, support the board's reasoning with respect to claims 21 and 24. Those claims were rejected as unpatentable over the Setterberg reference alone. Although they specify "flocculating slip," the board held they distinguish over the Setterberg reference only as to the fluidity of the mixture, and that no "unobvious or unexpected result would flow from adding sufficient water to the mixture of Setterberg to permit the same to be poured into molds. The mixture so diluted would, in our opinion, be a 'slip'." This holding overlooks the fact that, as pointed out by appellants, Setterberg shows only a "plastic dough," which is not a colloidal suspension, nor a slip. Furthermore, it is apparent that Setterberg does not contemplate ever having a colloidal suspension, nor a slip, therefore there could be neither a deflocculation nor a flocculation.

We are of the opinion that appellants have adequately described their process in claims 21 and 24, and that the process is patentable over the disclosure of Setterberg. A suspension is required by the word "slip." It is stated that the suspension is "flocculated." The flocculation is simultaneous with the generation of bubbles. The simultaneous generation of bubbles and flocculation are caused "by the reaction within the mass of a metal of the type of aluminum, zinc, and magnesium with an alkali metal hydroxide." (Claim 21). Of the above limitations, Setterberg shows *only the generation of gas bubbles* within the mass by the same reaction. The whole concept that the reaction be carried out so as to result in a simultaneous flocculation and generation of gas is lacking in Setterberg.

Since we believe claims 21 and 24 sufficiently distinguish over the reference, it becomes necessary to reverse the decision of the board as to those claims.

For the reasons stated, the decision of the Board of Appeals is affirmed as to claims 19 and 29, and reversed as to claims 21 and 24.

MODIFIED.

On account of illness, Garrett, Chief Judge, did not participate in the hearing or decision of this case.

Cole, J., concurs in reversal of claims 21 and 24 and dissents as to affirmance of claims 19 and 29.

Erratum.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

In the Matter of the Application *of* ROBERT JULES TATINCLOUX and ROGER GEORGES GUY.	Patent Appeal No. 6067.

Please make the following correction in the opinion of the court, handed down April 28, 1955, in the above-entitled appeal:

Page 8, line 10, change

19

to

29

so that the sentence reads: We concur with the board that claims 19 and 29 do not define invention over Nielson.

CABELL N. PEYOR,
Clerk.

May 20, 1955.

Letter, dated July 1, 1955.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

WASHINGTON 25, D. C.

July 1, 1955

Mr. John L. Seymour
Bauer & Seymour
30 Rockefeller Plaza
New York 20, New York

Re: Ex parte Robert Jules Tatincloux
and Roger Georges Guy
Patent Appeal No. 6067.

Dear Sir:

I beg to advise you that the court has this day granted appellants' petition for rehearing of the above-entitled appeal, said petition having been filed here on May 11, 1955, and has ordered that the case be reargued before the court during the November 1955 Patent Session. Counsel will be advised as to the exact day on which this appeal will be argued at a later date.

Very truly yours,

CABELL N. PRYOR,
Clerk

CNP:my
CC: Mr. E. L. Reynolds
Washington 25, D. C.
Solicitor for the Patent Office

Memorandum.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

Dec. 8, 1955.

Memorandum for Mr. Seymour:

Kindly return to this office the opinion of this court, handed down April 28, 1955, in Patent Appeal No. 6067. This opinion is to take its place.

CLERK.

Decision, dated December 8, 1955.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

IN THE MATTER OF THE APPLICATION *of* ROBERT JULES TATINCLOUX AND ROGER GEORGES GUY.	October Term 1955. Patent Appeal No. 6067. Patent Calendar No. 1. Serial No. 1,665.

WORLEY, Judge.

On April 28, 1955, we sent to counsel for the parties in interest a decision affirming that of the Board of Appeals of the United States Patent Office as to claims 19 and 29, and reversing that tribunal as to claims 21 and 24, for an application for a patent on "Refractories and Method of Making Them."

Pursuant to our practice, the decision was withheld from formal publication pending the exercise of appellants' right to petition under the rules of the court.

On May 11, 1955, appellants filed a petition for reconsideration of those parts of our decision relating to claims 19 and 29 of the application. That petition was granted and reargument was had on November 1, 1955.

We have carefully reconsidered the entire case in light of the petition and oral arguments of counsel for appellants and the Commissioner of Patents with respect thereto, and have made certain changes in the wording of our opinion. Consequently, our original opinion of April 28, 1955, is withdrawn and this opinion is substituted for it.

Two claims in appellants' application were allowed by the Primary Examiner. He rejected claims 19, 21 to 29, inclusive, and 31.

Decision, dated December 8, 1955.

The Board of Appeals reversed the examiner's rejection of claims 22, 23, 25, 26, 27, 28, and 31, and sustained his rejection of the other claims involved. On appeal here are claims 19, 21, 24, and 29. The first two are illustrative and read:

> 19. A process for making a refractory that comprises making an aqueous colloidal suspension of a refractory material, simultaneously filling the suspension with gas bubbles and flocculating said suspension about said bubbles, and thereafter drying and firing the product.
>
> 21. A process for making a refractory having a bubbly interior that comprises simultaneously generating bubbles in and flocculating slip by the reaction within the mass of a metal of the type of aluminum, zinc, and magnesium with an alkali metal hydroxide.

The invention is directed to the making of refractories, or, more specifically, bricks used in high temperature furnaces. They are characterized by their "bubbly" interiors which are said to provide high insulation properties. Appellants' specification states that the desired result is attained by placing the refractory material in colloidal suspension, filling the mass with bubbles, simultaneously flocculating it about the bubbles, then drying and firing the brick. It also advised that in the preferred form of the invention the refractory material, clay, is put in the form of a slip and the deflocculated mass simultaneously filled with gas bubbles and hardened by flocculating. The formation of the bubbles and the flocculating are carried out simultaneously by the reaction of a hydroxide, silicate, or carbonate of an alkaline metal with aluminum, zinc, or magnesium within the colloidal suspension. It is claimed that in the above method the bubbles are distributed very regularly throughout the mass, and

the subsequent hardening of the refractory material produces bricks of uniform structure possessing great strength and high insulating qualities.

The references relied on are:

Setterberg (Fr.)	281,254	April 12, 1928.
Nielsen	2,151,932	March 28, 1939.

The patent to Setterberg discloses a mixing of finely powdered refractory materials with sufficient water to form a plastic dough, adding a substance such as aluminum, capable of evolving gas by reaction with water, forcibly mixing the reaction material into the plastic dough, and then molding the mixture into blocks which are dried and burned at high temperature. The specification states that "Through the gas-forming process a great number of pores are formed and if care is taken in shaping of the blocks, these pores will remain in the blocks so formed."

The patent to Nielsen relates to a process for manufacturing porous articles of clay. It discloses several known processes for producing such articles, including air injection, mixing clay with a previously formed foam or a foam-producing substance, and generating gas within the clay mass. It states that those processes require the clay mass to be of a not too stiff consistency," the desired consistency usually being obtained by the addition of water; that certain drawbacks result therefrom in the molding of articles from the porous mass; and that the known methods of the manufacture of non-porous clay masses cannot be used to produce porous articles because the porous mass is too liquid to retain its shape. The patentee states that his invention eliminates those drawbacks by obtaining the desired liquid consistency without an increased admixture of water to the clay mass, but

by adding a deflocculating agent, such as alkaline hydroxides or salts of alkalies and weak acids, such as potash, soda, water glass, etc." to produce a slip, the liquid mass stiffened by chemical means in order to mold it in the normal manner.

The claims before us were rejected by the examiner on the patent to Setterberg, with claims 19 and 29 further rejected on Nielsen.

The board sustained the rejection of claims 21 and 24 on Setterberg, holding they distinguish over that reference only by reason of the fluidity of the mixture, and that no unobvious or unexpected result would be attained by adding sufficient water to Setterberg's mixture so that it could be poured into molds. The board stated such a mixture would constitute a "slip."

In comparing the Nielsen disclosure with claims 19 and 29, the board held that although claim 19 requires an aqueous colloidal suspension of a refractory material and a simultaneous filling of the suspension with gas bubbles and flocculation of the suspension about said bubbles, Nielsen discloses first the forming of the gas bubbles, and then the addition of a solidifying agent. The board added "It is not apparent that an unobvious or unexpected result would flow from adding the solidifying agent and forming the gas bubbles at the same time."

Claim 29 is dependent on claim 19 except for the limitation that the refractory material is clay. The board observed that Nielsen uses clay as the refractory material and held that claim unpatentable for the same reasons applicable to claim 19.

Thereafter appellants petitioned for reconsideration of the board's rejection of claims 19 and 29 on Nielsen, alleging that action to be contrary to its reasoning because of the statement quoted above.

Decision, dated December 8, 1955.

The board's attention was directed to an affidavit which alleged that tests made according to the Nielsen process and appellant's process show that "the comparable moduli of rupture for the refractories of applicants and of Nielsen are in the proportion of 19 for applicants' to about 5 for Nielsen's," and "Another astonishing advantage is also shown in that Nielsen refractory had a crushing strength of only 2 kg/sq.c. and another had a crushing strength of 8, whereas applicants' refractories had a crushing strength of 25 kg/sq.c."

The board, after noting that appellants had been allowed specific claims, and observing that the involved claims were broadly drawn, denied relief and held that the affidavit "is not convincing in connection with this broad question since affiant did not apply these two procedures to similar mixes employing the same ingredients in each."

We are in agreement with the board that claims 19 and 29 do not patentably distinguish over the Nielsen patent. A comparison of appellants' claim 19 with Nielsen's claim 1 reveals their similarity, the latter succinctly describing Nielsen's disclosure.

Appellants' Claim 19	Nielsen's Claim 1
A process for making a refractory that comprises making an aqueous colloidal suspension of a refractory material, simultaneously filling the suspension with gas bubbles and flocculating said suspension about said bubbles, and thereafter drying and firing the product.	Process for the manufacture of porous ceramic articles of argillaceous materials, consisting in the following steps, first adding deflocculants to a stiff plastic mass of clay then making the thus produced fluid mass porous by incorporating gases therein and finally adding flocculants to the porous fluid mass and moulding the thus produced restiffened porous mass in known manner.

Decision, dated December 8, 1955.

It will be noted that the only significant differences between the two claims are that claim 19 specifies a "colloidal suspension" instead of a "fluid mass," described in the specification of Nielsen as a "slip," and that it specifies "simultaneously" filling with bubbles and flocculating, instead of successively.

The fact that claim 19 specifies a "colloidal suspension" rather than a "slip" does not appear to describe the essential feature of appellants' invention. Their specification states that "In the preferred form of the invention a refractory body, such as clay, is put in the form of slip or barbotine and the deflocculated mass is simultaneously filled with gas bubbles and hardened by flocculating. Also in their brief the following appears:

> It also seems that the Board has erred in pretending to themselves that the invention will not work except in true colloidal solutions. That is a theory for which they have no justification. It will work in slips as well as in true colloidal suspensions, as the applicants have continuously asserted.

It would appear, therefore, that the basic question as to the patentability of claims 19 and 29 over the Nielsen reference relates to the simultaneity of the introduction of the gas and the flocculant. We are in agreement with the board that such action does not constitute invention. That requirement of the claims would be met if, in the Nielsen disclosure, air were introduced and flocculants were added at the same time, but, as the board said "It is not apparent that an unobvious or unexpected result would flow from adding the solidifying agent and forming the gas bubbles at the same time. Appellants interpret that as an argument in their favor, alleging "That statement does not deny that an unexpected result does occur, the Board simply states that it is not obvious that it would occur. • • •

The Board has, therefore, found as a fact that what the applicant has done is unobvious."

It is hardly necessary to dissect appellants' reasoning to show the error therein. As we understand the board's decision, it merely holds that in the absence of an unobvious result there would be no invention in performing the steps of filling the suspension with gas bubbles and flocculating it about them simultaneously instead of sequentially; and that no such unobvious result has been shown. We concur in that holding.

As was pointed out by the board, the affidavit relied on by the appellants as showing unobvious superiority of their product over that of Nielsen did not show application of the two procedures to identical mixes and, therefore, does not prove that the superiority of the product produced by appellants' process resulted from that process rather than from the specific materials employed.

As a general rule, no invention is involved in the broad concept of performing simultaneously operations which have previously been performed in sequence. *In re Eksergian*, 25 C. C. P. A. (Patents) 734, 92 F. (2d) 811, 35 USPQ 530, and *In re Mink*, 27 C. C. P. A. (Patents) 726, 107 F. (2d) 586, 43 USPQ 456. An exception may be made where a new and unexpected result is obtained by performing the operations simultaneously but, as above indicated, it has not been satisfactorily shown in the present case that such a result is obtained. We concur with the board that claims 19 and 29 do not define invention over Nielsen.

We can not, however, support the board's reasoning with respect to claims 21 and 24. Those claims were rejected as unpatentable over the Setterberg reference alone. Although they specify "flocculating slip," the board held they distinguish over the Setterberg reference only as to the fluidity of the mixture, and that no "unobvious or un-

expected result would flow from adding sufficient water to the mixture of Setterberg to permit the same to be poured into molds. The mixture so diluted would, in our opinion, be a 'slip.'" That holding, however, overlooks the fact that, as pointed out by appellants, Setterberg shows only a "plastic dough," which is neither a colloidal suspension nor a slip. Furthermore, it is apparent that Setterberg does not contemplate ever having a colloidal suspension or a slip, therefore there could be neither a deflocculation nor a flocculation.

We are of the opinion that appellants have adequately described their process in claims 21 and 24, and that the process is patentable over the disclosure of Setterberg. A suspension is required by the word "slip." It is stated that the suspension is "flocculated." The flocculation is simultaneous with the generation of bubbles. The simultaneous generation of bubbles and flocculation are caused "by the reaction within the mass of a metal of the type of aluminum, zinc, and magnesium with an alkali metal hydroxide." (Claim 21.)

Of the above limitations, Setterberg shows only the *generation of gas bubbles* within the mass by the same reaction. In view of the essential difference in the nature of the plastic mass of Setterberg and the slip called for by claims 21 and 24, we have grave doubts that the inventive concept of those claims is fairly suggested by the reference. Since, in our view, claims 21 and 24 sufficiently distinguish over the reference, it becomes necessary to reverse the decision of the board as to those claims.

As previously stated, we have reviewed our original decision in light of appellants' petition but find nothing therein to alter our original conclusion that the decision of the Board of Appeals should be, and it is hereby, affirmed as to claims 19 and 29, and reversed as to claims 21 and 24.

MODIFIED.

Order, dated January 16, 1956.

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

OCTOBER TERM, 1955

December 8, 1955

In the Matter of the Application *of* ROBERT JULES TATINCLOUX and ROGER GEORGES GUY.	Patent Appeal No. 6067.

Subject Matter: Improvement in refractories and methods of making them.

Serial No. 1,665.

Said appeal having heretofore been brought on to be reheard before the court (petition of appellants for rehearing having been granted and the cause reargued) and after reargument and due reconsideration thereon having been had, a new opinion has been written. The original opinion handed down April 28, 1955, is hereby withdrawn, and the opinion handed down this day is substituted therefor. Therefore, it is

ORDERED that the decision of the Board of Appeals be, and the same is hereby, affirmed as to claims 19 and 29 and reversed as to claims 21 and 24.

Order, dated January 16, 1956.

I, CABELL N. PRYOR, Clerk of the United States Court of Customs and Patent Appeals, do hereby certify that the above judgment and the attached opinion are true and correct copies of the judgment and opinion of said United States Court of Customs and Patent Appeals filed the 8th day of December, A. D. 1955, in the above-entitled appeal, as the same remain upon the files and records of said court.

WITNESS my hand and the seal of this court this 16th day of January, A. D. 1956.

(Signed) CABELL N. PRYOR,
Clerk.

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CITATION

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